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**Retrospective study of peritoneal dialysis-related peritonitis requiring
emergency laparotomy during 18 years in a single center**

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Objectives : Although extrinsic factors such as touch contamination were pointed out as the main reason in PD-related peritonitis, endogenous factors including intestinal problems were also observed. A typical example of the latter includes acute appendicitis, which is treated as an acute abdomen even in non-CKD patients, and emergency laparotomy is indicated depending on the condition. We herein investigated the characteristics of peritonitis at our hospital and the characteristics of cases of PD-related peritonitis that required emergency laparotomy, including exploratory laparotomy.

Methods : We investigated the occurrence of PD withdrawal and peritonitis among 191 patients who underwent PD over an 18-year period starting in 2005, as well as the characteristics of 9 patients who required emergency laparotomy. We also compared 8 cases of acute appendicitis or intestinal perforation that required emergency laparotomy (Group E) and 12 other cases (Group C) in 20 patients who withdrew from PD due to peritonitis.

Results : The mean age at PD introduction was 58.1 years, 77% were male, and the incidence of peritonitis was 0.14/patient year. Emergency laparotomy, including exploratory laparotomy, was performed in 9 of 122 cases of peritonitis. Acute appendicitis accounted for 44.4% and perforation cases accounted for 75%. Furthermore, preoperative diagnosis was difficult in more than half of the cases. During the observation period, PD withdrawal due to peritonitis occurred in 20 of 85 patients. Compared to group C, group E had a significantly higher number of bacterial species identified, day 0 blood white blood cell (WBC) count, CRP, and PD shedding leukocyte count, and the time to catheter removal was approximately 3 It was significantly shorter than 1 day.

Conclusions : It was found that there were cases of gastrointestinal perforation considering the symptoms. In addition to using multiple bacteria as a reference, elevated WBC and CRP levels were thought to be helpful in making decisions.